REMARKS

In the Office Action dated January 5, 2007, the Examiner required updating the present specification to include patent numbers for the application serial numbers that were used at the time original application was filed. Accordingly, the relevant paragraph in the substitute specification has been appropriately updated.

Claims 4, 5, 17, 18 and 51-56 were rejected under 35 U.S.C. §112, first paragraph because of the inadvertent use of "df/dH" and "f" rather than "df_r/dH" and "f_r" as was intended. Claims 4 and 17 have accordingly been corrected, and all claims are submitted to be in full compliance with all provisions of §112, first paragraph.

Claims 4, 5, 17, 18 and 51-56 were rejected under 35 U.S.C. §103(a) as being unpatentable over Liu et al. in view of Hasagawa. Claims 4, 5, 17, 18 and 51-56 also were rejected under 35 U.S.C. §103(a) as being obvious over Herzer '563 or Herzer et al. '695. These rejections are respectfully traversed for the following reasons.

In response to the previous rejection of these claims under 35 U.S.C. §103(a) as being unpatentable over Liu et al. in view of Hasagawa, made in the July 10, 2006 Office Action, Applicants provide arguments regarding the reliance on the part of the Examiner on Table 5 in the Hasagawa reference. These arguments were made in Applicants' Response filed October 16, 2006, and in Section 5 of the latest Office Action, beginning at page 7, the Examiner responded thereto. Applicants respectfully submit that Applicants' previous arguments regarding this portion of the disclosure of the Hasagawa reference are correct, and are relevant to overcoming the rejection of the aforementioned claims based on the teachings of Liu et al. and

Hasagawa. Applicants therefore provide the following further arguments on this point.

In Table 5, the Hasagawa reference discloses four examples of alloys that contain molybdenum in the ranges set forth in claim 4. These alloys are alloy nos. 2, 3, 6 and 7 in Table 5.

Table 6 in the Hasagawa reference identifies several properties that are measured for the alloys in Table 5, as can be discerned from the heading of Table 6. As shown in Table 6, alloy nos. 2, 3, 6 and 7 have a value of df_r/dH that is significantly higher than 1000 Hz/Oe, in direct contrast to the requirement of claim 4.

Applicants therefore do not see a basis for the Examiner's belief that the alloys disclosed in the Hasagawa reference, having a composition that overlaps the ranges set forth in claim 4, would be expected to possess all of the same properties as set forth in claim 4, since the only examples of such compositions in Table 5 clearly do not have such properties, as explicitly disclosed in Table 6. Applicants therefore submit that no experimentation is necessary in order to prove Applicants' assertion; the Hasagawa reference itself provides sufficient information to dispel any notion that the claim-overlapping alloys in Table 5 of the Hasagawa reference possess all of the properties that are also set forth in claim 4 of the present application. Table 6 of the Hasagawa reference, in fact, explicitly teaches the opposite, and makes clear that those alloys do *not* have the properties as set forth in claim 4.

The same arguments apply with regard to independent claim 17.

Applicant submit that this fact by itself should be sufficient to overcome the rejection of claims 4, 5, 17, 18 and 51-56 based on the teachings of Liu et al. and

Hasagawa. Applicants also disagree, however, with the Examiner's conclusion that a person of ordinary skill at the time the present invention was made would have been motivated to apply the process disclosed in Liu et al. for the purpose of making alloys as disclosed in Hasagawa, so as to improve the processing efficiency. On this point, Applicants are unable to find any specific teachings in the Liu et al. reference with regard to how processing efficiency can or should be improved. Of course, it is almost always a general goal in any process to improve the efficiency thereof, but using this desire as a motivating teaching for modifying or combining references under 35 U.S.C. §103(a) falls far short of the specific and detailed evidence that must be disclosed in the modified or combined references, in order to substantiate such a rejection. There are, or may be, hundreds if not thousands of possibilities for improving the efficiency of the Liu et al. process, and merely having a desire to improve the efficiency does not provide the necessary explicit guidance (evidence) to substantiate a rejection under 35 U.S.C. §103(a), particularly in view of the absence of any discussion of processing efficiency anywhere in the Liu et al. reference.

Applicants acknowledge that at column 8, lines 23-27, Liu et al. states that the continuous annealing process can be used with greater convenience and with lower labor cost than conventional annealing processes, but this still falls into the category of generalized statements discussed above, and does not assist a person of ordinary skill in the relevant technology in making any modifications to the Liu et al. process.

Continuous heat treatment of alloys has a number of practical difficulties associated therewith, such as sagging of the ribbon between supports or rollers within the furnace, due to the combination of the weigh of the ribbon, the high temperature, and possible sub-optimal feeding of the ribbon between the reels, as

examples. These are the types of factors that would have to be addressed with regard to the general goal of improving efficiency, and Applicants are unable to find any teachings in either the Liu et al. reference or the Hasagawa reference to suggest that any combination of the teachings of those references would have any effect whatsoever on these practical aspects of the annealing process.

For all of the above reasons, Applicants submit that none of claims 4, 5, 17, 18 or 51-56 would have been obvious to a person of ordinary skill in the field of magnetic amorphous alloy manufacturing, based on the teachings of Liu et al. and Hasagawa.

With regard to the rejection based on Herzer '563 and Herzer et al. '695, Applicants note that these two references are the patents that have issued based on the pending applications that were cited in paragraph [0065] of the original application. As stated in that paragraph, the alloys disclosed in those references do not fall within the scope of the present invention, because they have an appreciable cobalt content of more than 10 at%, which increases the raw material cost.

In addition to this basic difference, Applicants respectfully disagree with the Examiner's conclusion that the alloys disclosed in the Herzer '563 reference would be expected to possess all of the same properties as set forth in the claims of the present application, in view of the fact that the alloys in the Herzer '563 reference and the claims of the present application possess overlapping compositional ranges.

The Herzer '563 reference discloses two alloys, namely alloy nos. 10 and 11 in Table 1, that have an iron content of more than 30. The alloys 1 through 9 in Table 1 have an iron content of less than 30. In Table 5 of the Herzer '563 reference, resonator properties are identified for single resonators. As can be seen

from Table 5, alloys 3 through 9, having an iron content of less than 30, have a value for df_r/dH that is less than 1000. By contrast, alloys 10 and 11 in Table 5, that have an iron content of greater than 30, both have a value for df_r/dH that is greater than 1000.

Therefore, Applicants believe it is clear from the disclosure of the Herzer '563 reference itself that the alloys have different properties that depend on their composition, and those alloys identified in the Herzer '563 reference that have a composition that is most similar to the composition set forth in claims 4 and 17 do *not* have a value for df_r/dH that corresponds to the range set forth in claims 4 and 17 for that property.

Applicants therefore submit that a person of ordinary skill reviewing Table 5 of the Herzer '563 reference would reach the opposite conclusion from the Examiner, namely such a person would conclude that the alloys shown in Table 5 do not necessarily possess the properties of claims 4 and 17. In fact, Applicants submit that such a person would conclude, based on the content of Table 5, which is unlikely that the alloys with overlapping compositional ranges would necessarily possess the properties set forth in claims 4 and 17.

With regard to the Herzer et al. '695 reference, Table 1 of that reference identifies properties measured for alloys having an iron content of less than 30, these being alloy nos. 1 through 15, as well as properties for alloys having an iron content that is greater than 30, namely alloy nos. 16-24. None of these alloys include molybdenum, as required by claims 4 and 17. Moreover, of the alloys having an iron content of greater than 30, only alloy nos. 19 and 20 have a value for df_r/dH that is

less than 1000. The other alloys 16-18 and 21-24 have values for df_r/dH that are in some cases considerably more than 1000.

Applicants therefore respectfully submit that a person of ordinary skill in the relevant technology reviewing the Herzer et al. '695 reference would conclude that there is considerable variation in the properties such that no definitive conclusions can be made with regard to properties that necessarily would follow from, or be associated with, a particular composition or compositional range. Such a person of ordinary skill in the relevant technology would have no basis to conclude from the Herzer et al. '695 reference that alloys having a composition that falls within the scope of claim 4 or 17 would necessarily have a value for df_r/dH that is less than 1000.

For all of the above reasons, Applicants respectfully submit that none of claims 4, 5, 17,18 or 51-56 would have been obvious to a person of ordinary skill in the field of magnetic amorphous alloy manufacturing, based on the teachings of either Herzer '563 or Herzer et al. '695.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required, or to credit any overpayment to account No. 501519.

Submitted by,

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